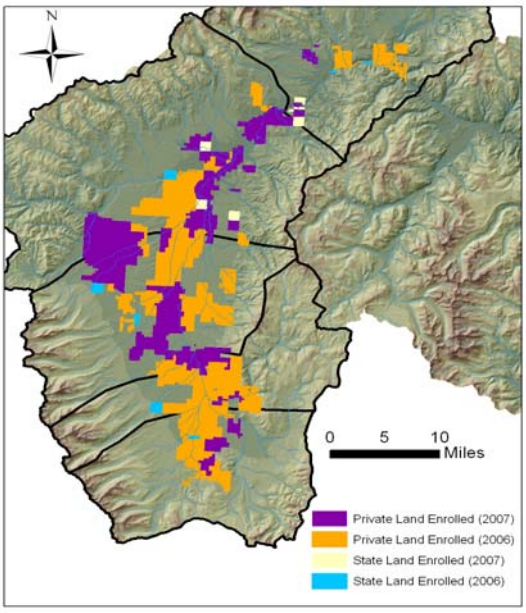
Region 3 - Southwest Montana

Arctic Grayling Recovery Program (ARGP)
(Jim Magee and Peter Lamothe)

In 2007, conservation efforts for Montana grayling included the continuation of one of the largest conservation programs at a watershed scale on private lands in the country. The Big Hole Candidate Conservation Agreement with Assurances Program (CCAA) goal is to secure and enhance the population of fluvial (river-dwelling) Arctic grayling within the upper reaches of the Big Hole River drainage. Montana fluvial Arctic grayling were historically distributed in the upper Missouri River drainage but have been reduced to one population in the Big Hole River, approximately 4% of their native range. In April 2007 the USFWS ruled that Montana fluvial Arctic grayling did not meet the criteria to be classified as an ESA species and were thus taken off the candidate species list. Conservation groups have challenged this finding and the final outcome for Endangered Species Act (ESA) status at this time is unknown. Arctic grayling still remain a species of special concern in Montana. Regardless of ESA status, conservation efforts for Arctic grayling have and will continue to expand with numerous habitat enhancement projects initiated in the Big Hole and additional landowners and private property enrolled in the CCAA program in 2007.

The CCAA is an agreement between FWP, USFWS, and any non-federal landowner that voluntarily agrees to manage their lands or waters to remove threats to grayling. The landowners receive assurances against additional regulatory requirements and incidental take authority should grayling be subsequently listed under the ESA. Enrollment as of January 1, 2008 includes 32 private landowners and approximately 158,169 acres of state and private land. This is the largest CCAA in the United Sates in terms of the number of landowners and privately property enrolled.

Big Hole River CCAA Enrollment



Big Hole CCAA enrollment as of January 1, 2008.

Under the CCAA, FWP holds an ESA Section 10(a)(1)(A) Enhancement of Survival Permit issued by the USFWS which authorizes the incidental take of grayling should it be listed under the ESA. Landowners can be included in this Permit through Certificates of Inclusion. The conservation goals of the program are achieved by working with each landowner to develop a conservation plan for their land that identifies specific actions that can protect and provide benefit to grayling. These site-specific plans will be developed with each landowner by an interdisciplinary technical team made up of individuals representing FWP, USFWS, Natural Resource and Conservation Service (NRCS), and Montana Department of Natural Resource and Conservation (DNRC). Conservation measures under the

Habitat restoration in the Wisdom Reach of the Big Hole River.

agreement will: 1) Improve streamflow, 2) Improve and protect the function of streams and riparian habitats, 3) Identify and reduce or eliminate entrainment threats for grayling, and 4) Remove barriers to grayling migration. This collaborative effort has developed partnerships with private landowners, The Big Hole Watershed Committee, the Big Hole River Foundation, The Nature Conservancy, Trout Unlimited and federal and state agencies.

Habitat restoration projects associated with the CCAA that address-limiting factors for grayling expanded dramatically in 2007. Habitat restoration included projects that stabilized streambanks and improved riparian vegetation and channel function on 18 miles of stream or river. These projects were protected by riparian fencing installed on approximately 36 miles of stream or river. Additional projects include developing 27 stock water systems to protect riparian areas and provide alternative stock water sources, installing 12 fish ladders and developing numerous fish friendly diversions to restore habitat connectivity and fish passage, the replacement of non-functioning irrigation control structures and measuring devices and the removal of confined animal feeding operations from floodplain. Similar projects are planned for 2008. In addition to these projects, installation of fish screens to prevent grayling from moving into irrigation diversions will begin in 2008.

Remote Site Incubators (RSIs) are used in the upper Ruby River to develop grayling eggs to under natural selective mechanisms.

In addition to the efforts in the Big Hole, restoration work continues to establish a grayling population in the Upper Ruby River. Each spring gametes are collected from fluvial grayling brood populations, developed to eye-up in the Yellowstone River Trout Hatchery and transported to upper Ruby River. Eyed eggs are placed in Remote Site Incubators (RSIs), which develop fry under natural selective mechanisms of the Ruby River. These efforts have been encouraging and have produced multiple age classes since 2004. Efforts will continue in 2008 with the goal of producing a stable age structure that will naturally reproduce and establish a self-sustaining population.

In 2007 habitat enhancement projects in the Ruby River system included channel reconstruction on Lazyman Creek that will improve spawning and rearing habitats, construction of high quality pools and bank stabilization on the mainstem Ruby that will decrease sediment and create summer and winter pool habitats. These projects are a

collaborative effort between FWP, private landowners, the Ruby Watershed Council, and the US Forest Service.

For an update on grayling recovery efforts please visit the AGRP website http://www.graylingrecovery.org/

Westslope Cutthroat Trout Restoration
(Lee Nelson)

Through a combination of habitat loss and introductions of nonnative fish, WCT, Montana's State fish, has declined significantly thoughout its native range. In southwest Montana, FWP Region 3, genetically unaltered WCT only occupy about 110 streams, and less than 5% of their historic range. In cooperation with the U.S. Forest Service, the Bureau of Land Management, Montana Trout Unlimited, and others, FWP Region 3 has launched numerous efforts to conserve WCT. Conservation efforts have included habitat improvement projects, introduction of WCT to historically fishless streams or streams where nonnative fish have been removed, removal of nonnative trout that compete or hybridize with native WCT populations, and construction barriers that prevent invasion of nonnative fish into streams occupied by WCT.

In-stream incubator used to introduce westslope cutthroat trout eggs

In 2007, a major focus of WCT conservation efforts in FWP Region 3 was the collection and introduction of over 10,000 wild WCT eggs to the upper sections of Cherry Creek near Ennis (Madison River drainage). This introduction project, and four similarly completed efforts in the Elkhorn Mountains near Helena, are intended to expand the overall range of WCT and to help preserve rare and potentially unique genetic characteristics of remaining wild WCT populations. In most cases, these introductions have occurred by directly introducing eggs collected from wild populations into the new streams using on-stream incubators. When completed after several more years of introductions, the Cherry Creek project will result in a WCT population that occupies about 60 miles of stream, or nearly twenty times the current distribution of genetically unaltered WCT in the Madison River drainage. Several additional WCT introduction efforts are currently being evaluated in Region 3, and at least one, in Elkhorn Creek in the Gallatin River drainage, will be initiated in 2008.

The removal of introduced, nonnative trout also continues to be a focus of WCT conservation efforts in select headwater stream areas. In 2007, the fish toxicant rotenone was used to remove nonnative brook trout and rainbow trout from about 20 miles of stream in the Cherry Creek drainage. Successful removal of nonnative trout from the headwaters of the drainage has already allowed introduction of WCT, and the project will be completed (about 60 miles of stream) with 2-4 additional years of

Westslope cutthroat trout.

toxicant application. Nonnative brook trout are also being removed using electrofishing from several small streams where they threaten native WCT populations. These projects are typically < 2 miles in length. Ongoing electrofishing removal efforts include Muskrat, McClellan, and SF of Warms Spring creeks in the Elkhorn Mountains near Helena, and McVey Creek in the Big Hole drainage near Wisdom. These projects, a high priority because these populations would be lost due to competition with brook trout, result in an almost immediate positive response from WCT. In some cases, WCT abundance has increased ten times after complete removal of nonnative brook trout. Similar efforts are being initiated in small tributaries the Red Rock and Ruby river drainages in 2008.